

IN THE CLAIMS:

Please amend Claims 1-4 and 9, and add new Claim 10, as follows. In accordance with the Revised Amendment Format, all claims are presented below.

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1. (Currently amended) An ink jet recording head comprising:
- a flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face, face;
 - ~~a energy generating member for generating energy to be utilized to discharge the ink from a discharge port formed on the front flat main surface side of the substrate;~~
 - a wiring electrode connected to ~~the~~ an energy generating member formed on the front flat main surface of the substrate, and said energy generating member generating energy to be utilized to discharge ink from a discharge port formed on the front flat main surface of the substrate;
 - a stepped surface provided at an end of the substrate and provided lower than the front flat main surface;
 - a connection ~~electrode~~, electrode electrically connected to the wiring electrode, ~~for receiving an electrical signal supplied from the outside of the substrate;~~ electrode and provided on the stepped surface;
 - ~~wherein the connection electrode is provided on another surface different from the front and back flat main surfaces of the substrate~~
 - an electrical wiring member superimposed on the connection electrode and electrically connected to the connection electrode through a bump electrode

to supply an electrical signal or an electrical power to the connection electrode; and ^{electrically connects} a sealing member for sealing and covering the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein said sealing member does not extend beyond the discharge port with respect to the front flat main surface.

2. (Currently amended) The ink jet recording head according to claim 1, wherein the substrate is an insulation substrate made of a single crystal Si material, and the surface of the Si material is insulating material, and wherein a pattern on a the other surface thereof of the substrate is formed by anisotropic etching.

3. (Currently amended) The ink jet recording head according to claim 2, wherein ~~the substrate is thin~~ said stepped surface is located in an area of the substrate that becomes thinner in a stepwise form fashion in the a vicinity of the end face.

4. (Currently Amended) The ink jet recording head according to claim 3, wherein ~~the other~~ a surface of said stepped surface is a plane parallel with the front flat main surface of the substrate.

5. (Withdrawn)

6. (Withdrawn)

7. (Original) The ink jet recording head according to claim 1, wherein the energy generating member is an electrothermal converting element for generating thermal energy.

8. (Original) The ink jet recording head according to claim 1, wherein the discharge port is disposed so as to face the energy generating member.

9. (Currently amended) An ink jet recording apparatus comprising:
an ink jet recording head having:
a flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face; face;

~~an energy generating member for generating energy to be utilized to discharge the ink from a discharge port formed on the front flat main surface side of the substrate;~~

a wiring electrode connected to the an energy generating member formed on the front flat main surface of the substrate, and said energy generating member generating energy to be utilized to discharge ink from a discharge port formed on the front flat main surface of the substrate;

a stepped surface provided at an end of the substrate and provided lower than the front flat main surface;

a connection ~~electrode~~, electrode electrically connected to the wiring electrode, ~~for receiving an electrical signal supplied from the outside of the substrate, the~~

connection electrode being provided on another surface different from the front and back flat main surfaces of the substrate; and electrode and provided on the stepped surface;

an electrical wiring member superimposed on the connection electrode and electrically connected to the connection electrode through a bump electrode to supply an electrical signal or an electrical power to the connection electrode;

a sealing member for sealing and covering the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein said sealing member does not extend beyond the discharge port with respect to the front flat main surface; and

a member on which the ink jet recording head is mounted.

10. (New) A method for sealing an electrode of an ink jet recording head, said ink jet recording head comprising a flat substrate, said flat substrate having an end face and front and back flat main surfaces, said front and back flat main surfaces having a larger area as compared to the end face, said ink jet recording head further comprising a wiring electrode connected to an energy generating member formed on the front flat main surface of the substrate, and an ink discharge port located above the front flat main surface, said method comprising the steps of:

providing a stepped surface at an end of the substrate such that the stepped surface is lower than the front flat main surface;

providing, on the stepped surface, a connection electrode electrically connected to the wiring electrode;

providing an electrical wiring member superimposed on the

connection electrode and electrically connected to the connection electrode through a bump electrode to supply an electrical signal or an electrical power to the connection electrode;
and

sealing and covering, with a sealing member, the connection electrode, the bump electrode, and the electrical wiring member on the stepped surface, wherein the sealing member does not extend beyond the discharge port with respect to the front flat main surface.

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